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Remarks

Reconsideration of pending Claims 1-79 and 139-140 is respectfully requested.

Claims 1, 18, 28, 31, and 55 have been amended. New claims 139-140 have been added.

Support for the amendment to Claim 31 and for new Claims 139-140 is in the specification at page 7, line 30 to page 8, line 12.

No new matter has been added with the amendments or the addition of the new claims. The amendments are intended to merely clarify language used in the claims and the subject matter claimed, and the scope of the claims is intended to be the same after the amendment as it was before the amendment.

Rejection of Claims under 35 U.S.C. 102(b) (Dhillon)

The Examiner rejected Claims 1-7, 9, 10, 15, 18-20, 22-24, 26-28, 30-37, 42-46, 49-66, 70-73, 76, and 77 under Section 102(b) as anticipated by USP 4,912,021 (Dhillon). Insofar as this rejection is maintained with respect to the amended claims, this rejection is respectfully traversed.

The Examiner cites Dhillon as teaching a composition that contains all ingredients identical to those recited in the claims (and elected by Applicant), with a pH of 5.8 to 7.8.

Dhillon is directed to a combination developing-finishing composition that can be used to develop and prepare a plate for the printing press or storage in a single operation.

Dhillon particularly teaches that it is necessary that a developer composition for lithographic plates have a particular combination of components to attain adequate speed of development with a minimum of redeposited particles.¹

¹ Dhillon at col. 1, lines 30-52: "...Attempts have been made in the past to prepare single composition developer/finishers, however, these suffer from drawbacks such as incompatibility of the components. In general, one cannot simply mix a developer and a finisher to obtain a useful developer/finisher. Developer compositions remove the non-image portion of the plate after it has been imagewise exposed. A finisher must function to desensitize the non-image areas to assure that they will not accept greasy ink upon printing. The finisher also prevents oxidation of the background areas of the plate during storage or while waiting for press mounting. The finisher must also be quickly removable from the plate so that it will not cause production delays. Typically the finisher must be quickly removable by a water rinse or most preferably must be removable by the fountain solution used on the press. Quick rollup is then essential in order to prevent paper waste and reduced production time. The developer/finisher should also bind removed non-image particles from the photosensitive surface so they are not redeposited back onto the plate."

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To that end, Dhillon teaches a developing, desensitizing and finishing composition for lithographic printing plates that has a pH 5.8 to 7.8 — which is preferably pH 6-7, and more preferably pH 6.3-6.6, and is formulated as an admixture of the following ingredients:

- 0.1% to 10.0% by wt of mono-, di-, or tri-sodium, potassium or lithium phosphate; *and*
- 0.1% to 10.0% by weight of benzyl alcohol, phenoxyethanol and phenoxypropanol; *and*
- **0.1% to 10.0% by weight of resin(s):** polyvinyl pyrrolidone, dextrin, poly (methyl vinyl ether/maleic acid) and gum arabic; *and*
- 0.1% to 10.0% by weight of acid(s): citric acid and/or benzoic acid; *and*
- 0.5% to 15.0% by weight of sodium and/or potassium octyl sulfate; *and*
- 1.0% to 15.0% by weight of sodium, potassium and lithium benzoate; *and*
- 0.2% to 10.0% by weight of sodium, potassium and ammonium citrate; *and*
- 0.2% to 15.0% by weight of sodium, potassium and ammonium sorbate; *and*
- sufficient water to formulate an effective developer.

Unlike Applicant's composition, Dhillon requires the inclusion of about 0.1% to 10.0% by weight resin(s) in the composition — e.g., polyvinyl pyrrolidone, dextrin).

Dhillon does not teach or suggest Applicant's compositions as claimed in Claims 1,² 18, 28, 31, 42, 51, 52, 55, or the claims depending therefrom, all of which recite that the composition comprises a cleaning agent, an antimicrobial agent(s), *and the balance solvent*. Nor does Dhillon teach or suggest the cleaning composition as recited in Claim 62, being a mixture of a cleaning agent, an antimicrobial agent, and solvent in amounts relative to one another to inhibit microbial growth within the cleaning composition, to remove residual particles from a substrate comprising both a metal structure and dielectric layer without the occurrence of significant defects, and to inhibit microbial deposition on the surface.

Dhillon fails to teach or suggest all of the limitations of the above-rejected claims. Accordingly, withdrawal of the Examiner's rejection is respectfully requested.

¹ Claim 1: A cleaning composition for a semiconductive substrate, comprising: effective amounts of a cleaning agent and at least one antimicrobial agent, *and the balance solvent*.

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Rejection of Claims under 35 U.S.C. 102(b) (Pregozen)

The Examiner rejected Claims 1-7, 9, 15, 18-20, 22-24, 26-35, 37, 42-47, 49-51, 55-66, 70-72, 76, and 77 under Section 102(b) as anticipated by USP 5,141,803 (Pregozen). Insofar as this rejection is maintained with respect to the amended claims, this rejection is respectfully traversed.

The Examiner cites Pregozen as teaching a composition that contains all ingredients identical to those recited in the claims (and elected by Applicant).

Pregozen is directed to an aqueous solution for impregnating a nonwoven wipe having a pH of 3.5 to 4.5. The solution contains a preservative solution *specifically adapted* to prevent microbial deterioration of the moist wipe.³ In particular, unlike Applicant's composition, Pregozen's composition is formulated with a *two specific cationic biocides* — polyhexamethylene biguanide hydrochloride and poly(oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride).⁴

Pregozen does not teach or suggest Applicant's compositions as claimed in Claims 1, 18, 28, 31, 42, 51, 52, 55, or the claims depending therefrom, all of which recite that the composition comprises a cleaning agent, an antimicrobial agent(s), *and the balance solvent*. Nor does Pregozen teach or suggest the cleaning composition as recited in Claim 62, being a mixture of a cleaning agent, an antimicrobial agent, and solvent in amounts relative to one another to remove residual particles from a substrate comprising both a metal structure and dielectric layer without the occurrence of significant defects, and to inhibit microbial growth within the cleaning composition and microbial deposition on the surface of a substrate.

With respect to Claims 18, 28, 55, and 60 ("*...and the balance water*"), Pregozen effectively teaches away from a composition containing sorbic acid and citric acid without the

³ See Pregozen at col. 3, lines 23-31 (emphasis added): "...The aqueous composition is comprised of water having dissolved therein a *preservative system specifically adapted to prevent microbial deterioration of the moist wipe*,... The preservative system is comprised of potassium sorbate, disodium ethylenediaminetetraacetate (disodium EDTA), a *cationic biocide selected from two specific agents described more fully hereinbelow* and citric acid.

⁴ See at cols. 3-4, bridging paragraph.

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presence of ethyl alcohol as being ineffective to provide adequate protection against microbial contamination.⁵

Pregozen fails to teach or suggest all of the limitations of the above-rejected claims. Accordingly, withdrawal of the Examiner's rejection is respectfully requested.

Rejection of Claims under 35 U.S.C. 103(a)

The Examiner rejected Claims 16 and 17 under Section 103(a) as obvious over either Dhillon or Pregozen in view of USP 6,156,661 (Small). Insofar as this rejection is maintained with respect to the amended claims, this rejection is respectfully traversed.

The Examiner maintains that it would be obvious to utilize the buffering agent (quaternary amine, ammonium hydroxide) disclosed by Small in either of the compositions of Dhillon or Pregozen in order to buffer the solution.

The Examiner also argues — in the alternative — that the cleaning agent of Small is identical to the cleaning agents of Dhillon and Pregozen (i.e., citric acid), so that it would be obvious to utilize citric acid with formic acid as an antimicrobial agent based on Small (or sorbic acid as an antimicrobial agent based on Dhillon or Pregozen) in combination with ammonium hydroxide based on Small to maintain a desired pH.

Small discloses an aqueous solution for removing chemical residues from metal or dielectric surfaces containing an organic acid and a *buffering amount of a base* (caustic component) — i.e., a hydroxide, a quaternary amine (TMAH, choline), an hydroxylamine, an hydroxylamine salt, a hydrazine or a hydrazine salt, to adjust the pH between 3.5 to 7.

First of all, there is no motivation to combine a base into Pregozen's composition for a buffering effect. Pregozen discloses an acidic solution having a pH 3.5 to 4.5, and particularly teaches using citric acid to adjust the pH of the solution. See at col. 4, lines 13-26, and col. 5, lines 24-35 (emphasis added):

The pH of the aqueous composition should be in the range of from about 3.5 to about 4.5 and preferably from about 4.0 to about 4.3. As disclosed hereinbefore, the antimicrobial activity

⁵ See at col. 1, lines 55-61: " Presently there is a trend to formulate impregnating compositions for nonwoven wipes which avoids the use of ethyl alcohol... However, a problem arises in eliminating ethyl alcohol from sorbic acid - citric acid - ethyl alcohol preservative systems for nonwoven wipes in that the combination containing only sorbic acid and citric acid does not always provide adequate protection against microbial contamination and deterioration.

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d rived from the use of potassium sorbate is due primarily to undissociated sorbic acid which is formed in situ in the pH range of 3.5 to 4.5. Citric acid is employed in the aqueous composition as a pH adjuster in an amount that ensures that the pH of the aqueous composition will fall in the range of from about 3.5 to about 4.5. A pH in this range can be obtained when citric acid is employed at a concentration of from about 0.05 to about 0.20 percent by weight of the aqueous composition.

...
All optional ingredients, except the plant extracts, to be included in the composition are combined and mixed until a clear mixture is obtained... Citric acid is then added to the stirred batch in an amount sufficient to adjust the pH to 3.5 to 4.5...

The clear teaching of Pregozen of citric acid as a pH adjuster essentially teaches away from the use of a base in Pregozen's composition. Accordingly, withdrawal of the rejection of claims 16 and 17 based on Pregozen combined with Small is respectfully requested.

As for the proposed combination of Small with Dhillon, one skilled in the art would have no motivation to combine the teachings of those two references, or to make the proposed modification of Dhillon.

Small's teaching of the use of a caustic base in a organic acid solution that is formulated for removing chemical residue from metal or dielectric surfaces provides no information or motivation for modifying Dhillon's developer/finisher composition for lithographic printing plates.

Dhillon particularly teaches that it is essential that a developer composition for lithographic plates have a particular combination of components to attain adequate speed of development with a minimum of redeposited particles.⁶ In the Background section, Dhillon also emphasizes problems that arise in etching and plating processes as a result of the ingredients of a developer or developer/finisher composition.⁷

There is nothing in either of the cited references that would motivate adding a caustic material to Dhillon's composition — particularly in view of Dhillon's teaching of a particular combination of ingredients to achieve a combination developer-finisher composition for lithographic plates, which requires (a) that a developer composition be formulated to remove the non-image portions of a plate after exposure, and (b) that a finisher desensitize the non-image

⁶ See footnote 1 above.

⁷ See at col. 2, lines 33-36 (emphasis added): "In the use of both developers and developer/finishers in machines, problems arise in the etching and plating of the process as a result of the ingredients of the developer or developer/finisher."

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areas, prevent oxidation of the background areas of the plate during storage or while waiting for press mounting, and be quickly removable from the plate. *In addition*, the developer/finisher should also bind removed non-image particles of the photosensitive surface so they are not re-deposited back onto the plate.⁸

Clearly, based on the teachings of Dhillon, there is no motivation to modify Dhillon's composition as proposed by the Examiner. Accordingly, withdrawal of the rejection of claims 16 and 17 based on the combination of Dhillon with Small is respectfully requested.

Extension of Term. The proceedings herein are for a patent application and the provisions of 37 CFR § 1.136 apply. Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that Applicant has inadvertently overlooked the need for a petition for extension of time.

Applicant believes that the claims are in condition for allowance, and notification to that effect is respectfully requested.

Respectfully submitted,



Kristine M. Strodthoff
Reg. No. 34,259

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WHYTE HIRSCHBOECK DUDEK S.C.
111 East Wisconsin Avenue, Suite 2100
Milwaukee, Wisconsin 53202
(414) 273-2100
Customer No. 31870

⁸ See Dhillon at col. 1, lines 30-52.